Application No.

10/088,856

Amendment Dated Reply to Office Action of

(12/21/2006) 10/21/2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A compound of formula (I)

$$R^2$$
 R^4
 R^4
 R^5

or a salt or prodrug-thereof;

where X is O, or S, S(O), S(O)₂ or NR⁶ where R⁸ is hydrogen or $C_{1\text{-Balkyl}}$;

R⁵ is a group-of-sub-formula-(i)->r (ii)

or a group of sub-formula (iii), (ii) or (v)

where R⁸⁰ is a substituent-solected from

[[1)]]a group of sub-formula (II)

$$(CH_2)_{s'}$$
 X^{12} $(CH_2)_{q'}$ R^{70} R^{99} (II)

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where q' is 0, 1, 2, 3 or 4;

s' is 0 or 1:

 X^{12} is C(O) or S(O₂),

 R^{70} is hydrogen, hydroxy, C_{1-6} alkyl, C_{1-6} alkoxy, amino, $N-C_{1-6}$ alkylamino, $N,N-(C_{1-6}$ alkyl)₂amino, $\label{eq:condition} \text{hydroxyC}_{2\text{-}6}\text{alkoxy}, \ C_{1\text{-}6}\text{alkoxyC}_{2\text{-}6}\text{alkoxy}, \ \text{aminoC}_{2\text{-}6}\text{alkoxy}, \ \textit{N-C}_{1\text{-}6}\text{alkylaminoC}_{2\text{-}6}\text{alkoxy}, \\ \text{hydroxyC}_{2\text{-}6}\text{alkoxy}, \ \text{hydroxyC}_{2\text{-}$ N,N-(C₁₋₈alkyl)₂aminoC₂-salkoxy or C₃-rcycloalkyl, or R70 is of the Formula (III):

wherein J is aryl, heteroaryl or heterocyclyl and K is a bond, oxy, imino, N-(C_{1-8} alkyl)imino, $\text{oxyC}_{\text{1-6}}$ alkylene, iminoC $_{\text{1-6}}$ alkylene, N-(C $_{\text{1-6}}$ alkyl)lminoC $_{\text{1-6}}$ alkylene, -NHC(O)-, -SO $_{\text{2}}$ NH-, -NHSO $_{\text{2-6}}$ or -NHC(O)-C1-saikylene-.

and any aryl, heteroaryl or heterocyclyl group in a R⁷⁰ group is optionally substituted by one or more groups selected from hydroxy, oxo, halo, trifluoromethyl, cyano, mercapto, nitro, amino, carboxy, carbamoyl, formyl, sulphamoyl, C₁₋₆alkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₁₋₆alkoxy, -O-(C₁₋₃alkyl)-O-, C₁₋₆alkylS(O)_n.· [[(]]wherein n is 0-2[[)]], N-C₁₋₆alkylamino, N,N-(C₁₋₆alkyl)₂amino, C_{1.6}alkoxycarbonyl, N-C_{1.6}alkylcarbamoyl, N,N-(C_{1.6}alkyl)₂carbamoyl, C_{2.6}alkanoyl, C_{1-6} alkanoyloxy, C_{1-6} alkanoylamino, N- C_{1-6} alkylsulphamoyl, N,N- $(C_{1-6}$ alkyl)₂sulphamoyl, C₁₋₈alkylsulphonylamino and C₁₋₈alkylsulphonyl-N-(C₁₋₈alkyl)amino, or any aryl, heteroaryl or heterocyclyl group in a R⁷⁰ group is optionally substituted with one or more groups of the Formula (IV):

$$-B^{\frac{1}{2}}(CH_2)_p - A^{\frac{1}{2}}$$
 (IV)

wherein A¹ is halo, hydroxy, C₁₋₈alkoxy, cyano, amino, N-C₁₋₈alkylamino, N,N-(C₁₋₈alkyl)₂amino, carboxy, C_{1-8} alkoxycarbonyl, carbamoyl, N- C_{1-8} alkylcarbamoyl or N,N-(C_{1-8} alkyl)₂carbamoyl, p is 1 - 6, and B^1 is a bond, oxy, imino, N-(C_{1-6} alkyl)imino or -NHC(O)-, with the proviso that p is 2 or more unless B1 is a bond or -NHC(O)-:

or any aryl, heteroaryl or heterocyclyl group in a R70 group is optionally substituted with one or more groups of the Formula (V):

$$- \epsilon^{1} D^{1}$$
 (V)

wherein D¹ is aryl, heteroaryl or heterocyclyl and E¹ is a bond, C₁₋₈alkylene, oxyC₁₋₈alkylene, oxy, imino, N-(C₁₋₆alkyl)imino, iminoC₁₋₆alkylene, N-(C₁₋₆alkyl)-iminoC₁₋₆alkylene, C₁₋₈alkylene-oxyC₁₋₈alkylene, C₁₋₁alkylene-iminoC₁₋₈alkylene, C1-salkylene-N-(C1-salkyl)-iminoC1-salkylene, -NHC(O)-, -NHSO2-, -SO2NH- or

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-NHC(O)- C_{1-6} alkylene-, and any aryl, heteroaryl or heterocyclyl group in a R^{70} group substituent en R^6 is optionally substituted with one or more groups selected from hydroxy, halo, C_{1-6} alkyl, C_{1-6} alkoxy, carboxy, C_{1-6} alkoxycarbonyl, carbamoyl, N- C_{1-6} alkylcarbamoyl,

N- $(C_{1-6}$ alkyl)₂carbamoyl, C_{2-6} all:anoyl, amino, N- C_{1-6} alkylamino and N,N- $(C_{1-6}$ alkyl)₂amino, and any C_{3-7} cycloalkyl or heterocyclyl group in a R^{70} group is optionally substituted with one or two oxo or thioxo substituents,

and any of the R^{70} groups defir ed hereinbefore which comprises a CH_2 group which is attached to 2 carbon atoms or a CH_3 group which is attached to a carbon atom may optionally bear on each said CH_2 or CH_3 group a substituent selected from hydroxy, amino, C_{1-8} alkoxy,

N-C₁₋₆alkylamino, N,N-(C₁₋₆alkyl)₂amino and heterocyclyl;

or R^{70} may be cycloalkeny! or alkenyl optionally substituted by aryl; and R^{99} is hydrogen or a group $C(O)R^{70}$ where R^{70} is as defined above;

2) a group of sub-formula (d)

where p' is 1-3, X¹⁰ and X¹¹ are independently selected from a bond, O , S or NR¹⁰¹ where R¹⁰¹ is hydrogen or a C₁₋₃alkyl, a revided that one of X¹⁰ or X¹¹ is a bond; and R¹⁰⁰ is optionally substituted hydrocarbyl or optionally substituted heterocyclyl, wherein any optional substituents are functional groups;

3) a group of formula (VI)

where R⁷⁴-and R⁷³ are independently selected from hydrogen or C₁₋₄alkyl, or R⁷⁴-and R⁷²-together form a bond, and R⁷³-is a group-DR⁷⁴, NR⁷⁵R⁷⁶-where R⁷⁴, R⁷⁵-and R⁷⁶-are independently selected from optionally substituted hydrocarbyl or optionally substituted heterocyclic groups, and R⁷⁵-and R⁷⁸-may additionally form together with the nitrogen atom-to which they are attached, an aromatic or non-aromatic heterocyclic ring which may contain further heteroatoms, wherein-suitable optional substituents for hydrocarbyl or heterocyclic groups R⁷⁴, R⁷⁵-and R⁷⁸ include functional groups and heterocyclic groups R⁷⁴, R⁷⁵-and R⁷⁵ and R⁷⁶-and R⁷⁶-and R⁷⁸-and R⁷⁸-a

4) a group of sub-formula (f)

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where p" is 0 or 1-and R⁸³ and IR⁸⁴ are independently selected from hydrogen, optionally substituted hydrogen optionally substituted heterocyclyl, or R⁸³ and R⁸⁴ together with the nitrogen atom to which they are attached form an optionally substituted heterocyclic ring and where optional substituents for hydrocarbyl or heterocyclic groups R⁸³ and R⁸⁴ include functional groups and heterocyclic groups R⁸³ or R⁸⁴ may further be substituted by a hydrocarbyl group; and

 R^{81} is hydrogen, halo, C_{1-4} alkox/, cyano, trifluoromethyl, or phenyl, and R^1 , R^2 , R^3 , R^4 are independently selected from halogeno, cyano, nitro, C_{1-3} alkylsulphanyl, $-N(OH)R^7$ - [[(]]wherein R^7 is hydrogen, or C_{1-3} alkyl[[)]], or R^8X^1 - [[(]]wherein X^1 represents a direct bond, $-O_{-}$, $-CH_{2^-}$, $-OC(O)_{-}$, $-C(C)_{-}$, $-S_{-}$, $-SO_{-}$, $-SO_{2^-}$, $-NR^{10}C(O)_{-}$, $-C(O)NR^{11}_{-}$, $-SO_{2}NR^{12}_{-}$, $-NR^{13}SO_{2^-}$ or $-NR^{14}_{-}$, [[(]]wherein R^{10} , R^{11} , R^{12} , R^{13} and R^{14} each independently represents hydrogen, C_{1-3} alkyl or C_{1-3} alkox) $^{\prime}C_{2-3}$ alkyl[[))]], provided that at least one of R^1 , R^2 , R^3 and R^4 is a group R^9X^1 - and R^9 is selected from one of the following groups: provided that at least one of R^2 or R^3 is other than hydrogen;

- 1) hydrogen or $C_{1.5}$ alkyl which may be unsubstituted or which may be substituted with one or more groups selected from hydroxy, oxiranyl, fluoro, chloro, bromo and amino-(including $C_{1.3}$ alkyl and-trifluoromethyl);
- 2) $-R^aX^2C(O)R^{15}$ [[(]]wherein X^2 represents -O- or $-NR^{16}$ _ [[(]]in which R^{16} represents hydrogen, C_{1-3} alkyl or C_{1-3} alkoxy C_{2-3} alkyl[[)] and R^{15} represents C_{1-3} alkyl, $-NR^{17}R^{18}$ or $-OR^{19}$ [[(]]wherein R^{17} , R^{18} and R^{19} which may be the same or different each represents hydrogen, C_{1-3} alkyl, hydroxy C_{1-5} alkyl or C_{1-3} alkoxy C_{2-3} alkyl[[))]];
- 3) -R^bX³R²⁰ [[(]]wherein X³ represents -O-, C(O) -S-, -SO-, -SO₂-, -OC(O)-, -NR²¹C(O)_s-, -C(O)NR²²-, -SO₂NR²³-, -NR²⁴SCl₂- or -NR²⁵- [[(]]wherein R²¹, R²², R²³, R²⁴ and R²⁵ each independently represents hydrogen, C₁₋₃alkyl, hydroxy C₁₋₄alkyl or C₁₋₃alkoxyC₂₋₃alkyl and s is 1 or 2[[)]] and R²⁰ represents hydrogen, C₁₋₆alkyl, C₂₋₆alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl or a 5-6-membered saturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which C₁₋₆alkyl group may bear 1, 2 or 3 substituents selected from oxo, hydroxy, halogeno, cyclopropyl, amino, C₁₋₄alkylamino,

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 C_{1-4} alkanoyldi- C_{1-4} alkylamino, C_{1-4} alkylthio, C_{1-4} alkoxy and which cyclic group may bear 1 or 2 substituents selected from oxc, hydroxy, halogeno, cyano, $C_{1\rightarrow}$ cyanoalkyl, $C_{1\rightarrow}$ alkyl, C_{1-4} hydroxyalkyl, C_{1-4} alkoxy, C_{1-4} alkoxy C_{1-4} alkyl, C_{1-4} alkyl, C_{1-4} alkoxycarbonyl, C_{1-4} aminoalkyl, C_{1-4} alkylamino, di(C_{1-4} alkyl)amino, C_{1-4} alkylamino C_{1-4} alkyl, di(C₁₄alkyl)aminoC₁₄alkyl, C₁₄alkylaminoC₁₄alkoxy, di(C₁₄alkyl)aminoC₁₄alkoxy and a group -(-O-) $_f(R^b)_gD$ [[(]]wherein f is 0 or 1, g is 0 or 1 and D is a C_{3-6} cycloalkyl group or a 5-6-membered saturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which cyclic group may bear one or more substituents selected from C₁₋₄alkyl[[))]]; 4) -R°X⁴R°′X⁵R²⁸ [[(]]wherein X° and X° which may be the same or different are each -O-, C(O), -S-, -SO-, -SO₂-, -NR²⁷C(O)₈-, -C(O)₈NR²⁸-, -SO₂NR²⁹-, -NR³⁰SO₂- or -NR³¹- [[(]]wherein R²⁷, R²⁸, R^{29} , R^{30} and R^{31} each independently represents hydrogen, $C_{1\cdot3}$ alkyl or $C_{1\cdot3}$ alkoxy $C_{2\cdot3}$ alkyl and s is 1 or 2[[)]] and \mathbb{R}^{28} represents hydrogen, C_{1-3} alkyl, hydroxy C_{1-3} alkyl or C_{1-3} alkoxy C_{2-3} alkyl[[)]]; 5) R³² [[(]]wherein R³² is a 4-6-membered cycloalkyl or saturated heterocyclic ring, [[(]]linked via carbon or nitrogen.[[)]] with 1-2 heteroatoms, selected independently from O, S and N, which cycloalkyl or heterocyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, cyano, C₁₄alkyl, hydroxyC₁₄alkyl, cyanoC₁₄alkyl, cyclopropyl, C_{1-4} alkylsulphonyl C_{1-4} alkyl, C_{1-4} alkoxycarbonyl, carboxamido, C_{1-4} aminoalkyl, C_{1-4} alkylamino, di(C₁₄alkyl)amino, C₁₄alkylamir oC₁₄alkyl, C₁₄alkanoyl, dì(C₁₄alkyl)aminoC₁₄alkyl, C_{1-4} alkylamino C_{1-4} alkoxy, di(C_{1-4} alkyl)amino C_{1-4} alkoxy nitro, amino, C_{1-4} alkoxy, C_{1-4} hydroxyalkoxy, carboxy, trifluoromethyl, -C(O)NR³⁸R³⁹, -NR⁴⁰C(O)R⁴¹, [[(]]wherein R³⁸, R³⁹, R^{40} and R^{41} , which may be the same or different, each represents hydrogen, C_{t-4} alkyl, $\label{eq:condition} \text{hydroxyC}_{1\text{--}4}\text{alkyl} \text{ or } C_{1\text{--}3}\text{alkoxyC}_{2\text{-}3}\text{alkyl}_{2}[[)]] \text{ and a group -(-O-)}_{f}(C_{1\text{--}4}\text{alkyl})_{g}\text{ringD} \ [[(]]\text{wherein f is 0}]_{g}(C_{1\text{--}4}\text{alkyl})_$ or 1, g is 0 or 1 and ring D is a cyclic group selected from C₃₋₆cycloalkyl, aryl or 5-6-membered saturated or unsaturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which cyclic group may bear one or more substituents selected from halo and C₁₋₄alkyl[[)]];

- 6) -R^dR³² [[(]]wherein R³² is as defined hereinbefore[[)]]:
- 7) -ReR32 [[(]]wherein R32 is as defined hereinbefore][)]];
- 8) -Rf R³² [[(]]wherein R³² is as defined hereinbefore[[)]];
- 9) R³³ [[(]]wherein R³³ represents a pyridone group, a phenyl group or a 5-6-membered aromatic heterocyclic group, [[(]]linked via carbon or nitrogen,[[)]] with 1-3 heteroatoms selected from O, N and S, which pyridone, phenyl or aromatic heterocyclic group may carry up to 5 substituents selected from hydroxy, nitro, hakigeno, amino, C1-4alkyl, C1-4alkoxy, C1-4hydroxyalkyl, C₁₋₄aminoalkyl, C₁₋₄alkylamino, C₁₋₄hydroxyalkoxy, oxo, cyanoC₁₋₄alkyl, cyclopropyl,

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 C_{1-4} alkylsulphonyl C_{1-4} alkyl, C_{1-4} alkoxycarbonyl, di $(C_{1-4}$ alkyl)amino, C_{1-4} alkylamino C_{1-4} alkyl, C_{1-4} alkylamino C_{1-4} alkyl)amino C_{1-4} alkyl, C_{1-4} alkylamino C_{1-4} alkoxy, di $(C_{1-4}$ alkyl)amino C_{1-4} alkoxy, carboxy, carboxamido, trifluoromethyl, cyano, $-C(O)NR^{38}R^{39}$, $-NR^{40}C(O)R^{41}$, [[(])wherein R^{38} , R^{39} , R^{40} and R^{41} , which may be the same or different, each represents hydrogen, C_{1-4} alkyl, hydroxy C_{1-4} alkyl or C_{1-3} alkoxy C_{2-3} alkyl,[[)]] and a group -(-O-)r(C_{1-4} alkyl)gringD [[(]]wherein f is 0 or 1, g is 0 or 1 and ring D is a cyclic group selected from C_{3-6} cycloalkyl, aryl or 5-6-membered saturated or unsaturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which cyclic group may bear one or more substituents selected from halo and C_{1-4} alkyl[[)];

- 10) -R⁹R³³ [[(]]wherein R³³ is as defined hereinbefore[[)]];
- 11) -R^hR³³ [[(]]wherein R³³ is as defined hereinbefore[[)]];
- 12) -R^I R³³ [[(]]wherein R³³ is as defined hereinbefore[[)]];
- 13) -R^J X⁶R³³ [[([]]wherein X⁶ represents -O-, -C(O)-, -S-, -SO-, -SO₂-, -OC(O)-, -NR³⁸C(O)-, -C(O)NR³⁹-, -SO₂NR⁴⁰-, -NR⁴¹SO₂- or -NR⁴²-, [[(]]wherein R³⁸, R³⁹, R⁴⁰, R⁴¹ and R⁴² each independently represents hydrogen, C_{1-3} alkyl, hydroxy C_{1-3} alkyl or C_{1-3} alkyl, [[(])] and R³³

is as defined hereinbefore[[)]];

- -R^kX⁷R³³ [[(]]wherein X⁷ represents -O-, C(O), -S-, -SO-, -SO₂-, -NR⁴³C(O)-, -C(O)NR⁴⁴-, -SO₂NR⁴⁵-, -NR⁴⁶SO₂- or -NR⁴⁷-, [[(]]wherein R⁴³, R⁴⁴, R⁴⁵, R⁴⁶ and R⁴⁷ each independently
- represents hydrogen, C₁₋₃alkyl, hydroxyC₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl,[[)]] and R³³ is as defined hereinbefore[[)]];
- -R^mX⁸R³³ [[(]]wherein X⁸ represents -O-, -C(O)-, -S-, -SO-, -SO₂-, -NR⁴⁸C(O)-, -C(O)NR⁴⁹-, -SO₂NR⁵⁰-, -NR⁵¹SO₂- or -NR⁵²-, [[()]wherein R⁴⁸, R⁴⁹, R⁵⁰, R⁵¹ and R⁵² each independently represents hydrogen, C₁₋₃alkyl, hydroxyC₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl,[[)]] and R³³ is as defined

hereinbefore[[]]]:

- 16) -Rⁿ X⁸RⁿR³³ [[([]]wherein X⁹ nepresents -O-, -C(O)-, -S-, -SO-, -SO₂-, -NR⁵³C(O)-, -C(O)NR⁵⁴-, -SO₂NR⁵⁵-, -NR⁵⁶SO₂- or -NR⁵⁷-, [[([]]wherein R⁵³, R⁵⁴, R⁵⁵, R⁵⁶ and R⁵⁷ each independently represents hydrogen, C₁₋₃alkyl, hydroxyC₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl,[[()]] and R³³ is as defined hereinbefore[[()]]:
- 17) -R^pX⁹-R^pR³² [[(]]wherein X⁹ and R³² are as defined hereinbefore[[)]];
- 18) C₂₋₅alkenyl which may be unsubstituted or which may be substituted with one or more groups selected from hydroxy, fit oro, amino, C₁₋₄alkylamino, N,N-di(C₁₋₄alkyl)amino, aminosulphonyl, N-C₁₋₄alkylaminosulphonyl;

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- 19) $C_{2\cdot5}$ alkynyl which may be unsubstituted or which may be substituted with one or more groups selected from hydroxy, fluoro, amino, $C_{1\cdot4}$ alkylamino, N,N-di($C_{1\cdot4}$ alkyl)amino, aminosulphonyl, N- $C_{1\cdot4}$ alkylaminosulphonyl and N,N-di($C_{1\cdot4}$ alkyl)aminosulphonyl;
- 20) -R $^{t}X^{9}R^{r}R^{32}$ [[([]]wherein X^{9} and R^{32} are as defined hereinbefore[[)]];
- 21) -R"X⁹ R"R³² [[([]]wherein X⁵ and R³² are as defined hereinbefore[[)]]; and
- 22) $-R^{v}R^{58}(R^{v})_{q}(X^{8})_{r}R^{59}$ [[(]]wherein X^{8} is as defined hereinbefore, q is 0 or 1, r is 0 or 1, and R^{58} is a C₁₋₃alkylene group or a cyclic group selected from cyclopropyl, cyclobutyl, cyclopentylene, cyclohexylene or a 5-6-membered saturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which C_{1-3} alkylene group may bear 1 or 2 substituents selected from exe, hydroxy, halogene and C_{1-4} alkoxy and which cyclic group may bear 1 or 2 substituents selected from exo, hydroxy, halogeno, cyano, C₁₄cyanoalkyl, C₁₄alkyl, C₁₄hydroxyalkyl, C_{1-4} alkoxy, C_{1-4} alkoxy C_{1-4} alkyl, C_{1-4} alkylsulphonyl C_{1-4} alkyl, C_{1-4} alkoxycarbonyl, C_{1-4} aminoalkyl, C₁₄alkylamino, di(C₁₄alkyl)amino, C₁₄alkylaminoC₁₄alkyl, di(C₁₄alkyl)aminoC₁₄alkyl, $C_{1\rightarrow a}$ lkylamino $C_{1\rightarrow a}$ lkoxy, di $(C_{1\rightarrow a}$ lkyl)amino $C_{1\rightarrow a}$ lkoxy and a group - $(-O_{-})_f(C_{1\rightarrow a}$ lkyl) $_g$ ring D_{\perp} [[(]]wherein f is 0 or 1, g is 0 or 1 and ring D is a cyclic group selected from C_{3-6} cycloalkyl, aryl or 5-6-membered saturated or unsaturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which cyclic group may bear one or more substituents selected from halo and C_{1-4} alkyl[[]]]; and R^{59} is hydrogen, C_{1-3} alkyl, or a cyclic group selected from cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl and a 5-6-membered saturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which C₁₋₃alkyl group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, C₁₋₄alkoxy and which cyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, cyano, C₁₄cyanoalkyl, C_{14} alkyl, C_{14} hydroxyalkyl, C_{14} alkoxy, C_{14} alkoxy C_{14} alkyl, C_{14} alkyl, C_{14} alkyl, C_{14} alkyl, C_{1-4} alkoxycarbonyl, C_{1-4} aminoalkyl, C_{1-4} alkylamino, di(C_{1-4} alkyl)amino, C_{1-4} alkyl, $di(C_{14}alkyl)aminoC_{14}alkyl, C_{14}alkylaminoC_{14}alkoxy, di(C_{14}alkyl)aminoC_{14}alkoxy and a group$ -(-O-)₁(C₁-₄alkyl)eringD [[(]]wherein f is 0 or 1, g is 0 or 1 and D is a cyclic group selected from C₃-₅cycloalkyl, aryl or 5-6-membered saturated or unsaturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which cyclic group may bear one or more substituents selected from halo and C1-alkyl[[)]];

and wherein R^a , R^b , R^b , R^c , R^c , R^c , R^d , R^g , R^l , R^n , R^n , R^p , R^p , R^r , R^u , R^u , R^v and R^v are independently selected from C_{1-8} alkylene groups optionally substituted by one or more substituents selected from hydroxy, halogeno, amino.

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 $R^e R^h$, R^k and R^t are independently selected from C_{2-8} alkenylene groups optionally substituted by one or more substituents selected from hydroxy, halogeno, amino, and R^t may additionally be a bond; and

R^r, R^r, R^m and R^u are independently selected from by C₂₋₈alkynylene groups optionally substituted by one or more substituents selected from hydroxy, halogeno, amino; and where a functional group is selected from nitro, cyano, halo, oxo, = $CR^{78}R^{79}$, $C(O)_xR^{77}$, OR^{77} , $S(O)_y R^{77}$, $NR^{78}R^{79}$, $C(O)NR^{78}F^{79}$, $OC(O)NR^{78}R^{79}$, $=NOR^{77}$, $-NR^{77}C(O)_x R^{78}$, $-NR^{77}CONR^{78}R^{79}$, -N=CR 78 R 79 , S(O) $_y$ NR 78 R 79 or -NR 77 S(O) $_y$ R 78 where R 77 , R 78 and R 79 are independently selected from hydrogen, optionally substituted hydrocarbyl, optionally substituted heterocyclyl or optionally substituted alkoxy, or R⁷⁸ and R⁷⁹ together form an optionally substituted ring which optionally contains further heteroatoms such as oxygen, nitrogen, S, S(O) or S(O) $_2$, where x is an integer of 1 or 2, y is 0 or ar integer of 1-3 and where hydrocarbyl, heterocyclyl or alkoxy groups R^{77} , R^{78} and R^{79} as well as rings formed by R^{78} and R^{79} are optionally substituted by halo, perhaloalkyl, mercapto, alkylthio, hydroxy, carboxy, alkoxy, heteroaryl, heteroaryloxy, cycloalkyl, cycloalkenyl, cycloalkynyl, alkenyloxy, alkynyloxy, alkoxyalkoxy, aryloxy [[(]]where the aryl group may be substituted by halo, nitro, or hydroxy[[)]], cyano, nitro, amino, mono- or di-alkyl amino, oximino or $S(O)_y R^{90}$ where y is 0 or an integer of 1-3 and R^{90} is a alkyl; and wherein hydrocarbyl is selected from alkyl, alkenyl, alkynyl, aryl, aralkyl, cycloalkyl, cycloalkenyl, or combinations thereof.

2-5. (Canceled)

- 6. (Currently amended) A compound according to claim 1 wherein R¹, R², R³, R⁴ are independently selected from, halo, cyano, nitro, trifluoromethyl, C₁₋₃alkyl, -NR⁷R⁸ (wherein-R⁷ and R⁸, which may be the same or different, each represents hydrogen or C₁₋₃alkyl), or other groups from formula -X¹R⁹ [[(]]wherein X¹ represents a direct bond, -O-, -CH₂-, -OCO-, carbonyl, -S-, -SO-, -SO₂-, -NR¹⁰CO-, -CONR¹¹-, -SO₂NR¹²-, -NR¹³SO₂- or -NR¹⁴-, [[(]]wherein R¹⁰, R¹¹, R¹², R¹³ and R¹⁴ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[[)]], and R⁹ is selected from one of the following groups:
- 1') hydrogen or C_{1-5} alkyl which may be unsubstituted or which may be substituted with one or more groups selected from hydroxy, fluoro or amino,
- 2') $C_{1.5}$ alkyl X^2 C(O) R^{15} [[(]]wherein X^2 represents -O- or -N R^{16} [[(]]In which R^{15} represents hydrogen, $C_{1.5}$ alkyl or $C_{1.5}$ alkoxy $C_{2.5}$ alkyl[[)]] and R^5 represents $C_{1.5}$ alkyl, -N R^{17} R^{16} or -O R^{19}

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[[(]]wherein R^{17} , R^{18} and R^{19} which may be the same or different each represents hydrogen, C_{1-3} alkyl or C_{1-3} alkoxy C_{2-3} alkyl[[))];

- 3') C₁₋₅alkylX³R²⁰ [[(]]wherein X³ represents -O-, -S-, -SO-, -SO₂-, -OCO-, -NR²¹CO-, -CONR²²-, -SO₂NR²³-, -NR²⁴SO₂- or -NR¹⁵-, [[(]]wherein R²¹, R²², R²³, R²⁴ and R²⁵ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[[])] and R²⁰ represents hydrogen, C₁₋₃alkyl, cyclopentyl, cyclohexyl or a 5-5-membered saturated heterocyclic group with 1-2 heteroatoms, selected independently from C₁, S and N, which C₁₋₃alkyl group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno and C₁₋₄alkoxy and which cyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, C₁₋₄alkyl, C₁₋₄hydroxyalkyl and C₁₋₄alkoxy[[])]; 4') C₁₋₅alkylX⁴C₁₋₅alkylX⁵R²⁶ [[[]]wherein X⁴ and X⁵ which may be the same or different are each -O-, -S-, -SO-, -SO₂-, -NR²⁷CO-, -CONR²⁸-, -SO₂NR²⁹-, -NR³⁰SO₂- or -NR³¹-, [[[]]wherein R²⁷, R²⁸, R²⁰, R³⁰ and R³¹ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl[[])]; and R²⁶ represents hydrogen or C₁₋₃alkyl[[])];
- 5') R³² [[(]]wherein R³² is a 5-6-membered saturated heterocyclic group, [[(]]linked via carbon or nitrogen,[[)]] with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno, C₁₋₄alkyl, C₁₋₄alkoxy, C₁₋₄alkoxyC₁₋₄alkyl and C₁₋₄alkylsulphonylC₁₋₄alkyl[[)]];
- 6') C_{1-5} alkyl R^{32} [[(]]wherein R^{32} is as defined in (5') above[[)]];
- 7') C₂₋₅alkenylR³² [[(]]wherein R^{1/2} is as defined in (5') above[[)]];
- 8') C₂-₅alkynyiR^{s2} [[(]]wherein R^{t2} is as defined in (5') above[[)]];
- 9') R³³ [[([]]wherein R³³ represents a pyridone group, a phenyl group or a 5-6-membered aromatic heterocyclic group, [[([]]linked via carbon or nitrogen,[[)]] with 1-3 heteroatoms selected from O, N and S, which pyridone, phenyl or aromatic heterocyclic group may carry up to 5 substituents on an available carbon atom selected from hydroxy, halogeno, amino, C₁₋₄alkyl, C₁₋₄alkoxy, C₁₋₄hydroxyalkyl, C₁₋₄aminoalkyl, C₁₋₄alkylamino, C₁₋₄hydroxyalkoxy, carboxy, trifluoromethyl, cyano, -CONR³⁴R³⁵ and -NR³⁶COR³⁷, [[(]]wherein R³⁴, R³⁵, R³⁶ and R³⁷, which may be the same or different, each represents hydrogen, C₁₋₄alkyl or C₁₋₃alkoxyC₂₋₃alkyl[[())];
- 10') $C_{1.5}$ alkyl R^{33} [[(]]wherein R^{33} is as defined in (9') above[[)][;
- 11') C₂₋₅alkenyIR³³ [[(]]wherein R³³ is as defined in (9') above[[)]];
- 12') C_{2-5} alkynyl R^{33} [[(]]wherein R^{13} is as defined in (9') above[[)]];
- 13') C_{1-5} alkyl X^6 R³³ [[(]]wherein X^6 represents -O-, -S-, -SO-, -SO₂-, -NR³⁸CO-, -CONR³⁹-, -SO₂NR⁴⁰-, -NR⁴¹SO₂- or -NR⁴²-, [[(]]wherein R³⁸, R³⁹, R⁴⁰, R⁴¹ and R⁴² each independently represents hydrogen, C_{1-3} alkyl or C_{1-3} alkoxy C_{2-3} alkyl,[[)]] and R³³ is as defined hereinbefore[[)]];

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- 14') C₂₋₅alkenylX⁷R³³ [[([])wherein X⁷ represents -O-, -S-, -SO-, -SO₂-, -NR⁴³CO-, -CONR⁴⁴-, -SO₂NR⁴⁵-, -NR⁴⁶SO₂- or -NR⁴⁷-, [[([]]wherein R⁴³, R⁴⁴, R⁴⁵, R⁴⁶ and R⁴⁷ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl,[[()]] and R³³ is as defined hereinbefore[[()]]; 15') C₂₋₅alkynylX⁶R³³ [[([)]wherein X⁶ represents -O-, -S-, -SO-, -SO₂-, -NR⁴⁸CO-, -C(O)NR⁴⁹-, -SO₂NR⁵⁰-, -NR⁵¹SO₂- or -NR^{1/2}-, [[()]wherein R⁴⁸, R⁴⁹, R⁵⁰, R⁵¹ and R⁵² each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl,[[()]] and R³³ is as defined hereinbefore[[()]]; 16') C₁₋₃alkylX⁶C₁₋₃alkylR³³ [[(()]wherein X⁶ represents -O-, -S-, -SO₂-, -NR⁵³CO-, -C(O)NR⁵⁴-, -SO₂NR⁶⁵-, -NR⁶⁶(3O₂- or -NR⁵⁷-, [[(()]wherein R⁵³, R⁵⁴, R⁶⁵, R⁶⁸ and R⁶⁷ each independently represents hydrogen, C₁₋₃alkyl or C₁₋₃alkoxyC₂₋₃alkyl,[[()]] and R³³ is as defined hereinbefore[[()]]; and
 17') C₁₋₃alkylX⁹C₁₋₃alkylR³² [[(()]wherein X⁸ and R³² are as defined in (5') above[[()]], provided that at least one of R² or R³ is other than hydrogen.
- 7. (Previously presented) A compound according to claim 1, where R¹ is hydrogen and R⁴ is hydrogen, haio, C₁₋₄alkyl or C₁₋₋alkoxy.
- 8-9. (Canceled)
- 10. (Currently amended) A compound according to claim 1 or claim 7 wherein R^3 is a group X^1R^9 where X^1 is oxygen and R^3 includes a methylene group directly adjacent to X^4 .
- 11. (Cancelled)
- 12. (Currently amended) A compound according to claim [[1]]7 wherein R⁹ is selected from a group (1), (3), (6) or (10).
- 13. (Previously presented) A compound according to claim 12 wherein X is NH or O.
- 14-17. (Canceled)
- 18. (Previously presented) A compound according to claim 13 wherein R^5 is a group of formula (iii).
- 19-20. (Canceled)

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21. (Currently amended) A compound according to claim $1\underline{3}$ wherein R^{80} is a group of sub formula (II) which is a group of formula (IIA)

$$(CH_2)_{s'}$$
 N $(CH_2)_{q'}$ R^{70} (IIA)

where s', q' and R^{70} are as defined in claim 1.

22. (Previously presented) A compound according to claim 1 or claim 21 wherein R⁸⁰ includes a group R⁷⁰ and said group is phenyl optionally substituted by halo.

23-25. (Cancelled)

26. (Withdrawn) A method for preparing a compound of formula (I) as defined in claim 1, which method comprises reacting a compound of formula (VII)

where $R^{1'}$, $R^{2''}$, $R^{3'}$, and $R^{4'}$ are equivalent to a group R^{1} , R^{2} , R^{3} and R^{4} as defined in relation to formula (I), and R^{65} is a leaving group, with a compound of formula (VIII)

where X and R⁶ are as defined in relation to formula (I).

27-28. (Canceled)

29. (Currently amended) A pharmaceutical composition comprising a compound according to any one of claims 1, 7, 12, 18 or 34 6 or salt er prodrug-thereof, in combination with a pharmaceutically acceptable carrier.

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30. (Canceled)

- 31. (Previously presented) A compound according to claim 1 wherein both R¹ and R⁴ are hydrogen.
- 32. (Previously presented) A compound according to claim 12 wherein one of \mathbb{R}^2 or \mathbb{R}^3 is 3-morpholinopropoxy.

33-36. (Cancelled)

37. (Currently amended) A method for treating colorectal or breast cancer in a warm blooded animal, such as man, in need of such treatment, which comprises administering to said animal an effective amount of a compound according to claim 1, or salt or produce thereof.